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EXAMINER

FOUD, HICHAM B

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/761,879	Applicant(s) BISHARA ET AL.	
	Examiner HICHAM B. FOUAD	Art Unit 2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-84 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment filed on 08-24-2009 has been entered and considered.

Claims 1-84 are pending in this application.

Claims 1-84 remain rejected as discussed below.

Claim Objections

2. Claims 1-84 are objected to because of the following informalities:

The terms such as “whether”, “when”, “unapproved” and “approved” are used a lot and which creates confusion such as claim 6. Therefore, the applicant is required to make the appropriate corrections to avoid ambiguity.

Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The claim language of claim 2 is already contained in claim 1 and therefore, does not further limit claim 1. Similar issue occurs in claims 25, 48 and 67.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-23, 27-46, 50-65 and 64-84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-19 are vague and indefinite because of the ambiguity of the claimed language used, which creates confusion. It is clear from Fig.2 that the use of "FLAG" is the one controlling the approved or the unapproved of the association. However, the claimed language does not reflect the clear and direct steps of the Figure, but instead uses vague language that renders the claims indefinite (see at least claim 6). Therefore, it is not known the metes and the bounds of the claimed invention. Similar issues occur in the correspondent dependant claims of the other sets.

In claim 8, the term "the entry" has no antecedent basis". Similar issues occur to the correspondent dependant claims of the other sets.

Claims 20-23 are vague and indefinite because it is not known if they depend on claim 1 or they are independent claims. Therefore, it is not known the metes and the bounds of the claimed invention.

Claims are rejected as best understood.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-11, 15-19, 24-30, 32-34 and 38-53, 55-57, 61-72, 74-76 and 80-84 are rejected under 35 U.S.C. 102(b) as being anticipated by Hendel (US 6,115,378).

Claims are rejected as best understood.

For claim 1, Hendel discloses an apparatus comprising: a plurality of network ports (see Fig.4 elements E1, E2, E3); a central processing unit (CPU) interface (see Fig.4 element 460; CPS); and a controller (see Fig.4 element 410) to send, to the CPU interface, a request to approve an association between one of the plurality of network ports and a source media access control (MAC) address of a packet received on the one of the plurality of network ports (see col.11 lines 50-59; wherein the learning of new/unknown source address arriving at port E1 triggers the sending of notification (claimed request) to the CPS 460) when no request to approve the association between the one of the plurality of network ports and the source MAC address has been sent to the CPU interface (see col.11 lines 50-59; since the new/unknown source address arriving at port E1 triggers the sending of notification to the CPS 460; it is clear that there is no prior notification is being sent because the source address is new/unknown), and send, to the CPU interface, the request when an approval for an association between the source MAC address and a different one of the plurality of network ports (see col.11 lines 50-59; wherein the learning of source address that already exists with different port entry triggers the sending of notification to the CPS 460 (claimed CPU interface)) has been received from the CPU interface (see also col.7 lines 57-59; CPS serves to add entries and associated data to the forwarding memories in the element 410 (claimed controller) and also col.8 lines 1, CPS (claimed CPU interface) enters and

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manages type 2 (MAC address) in the forwarding memories in the element 410 (claimed controller); therefore, it must be two way communication between CPS (claimed CPU interface) and the element 410 (claimed controller) to add entries in the forwarding memories in the element 410 (claimed controller)).

For claim 2, Hendel discloses an apparatus wherein the controller further determines whether an association exists between one of the plurality of network ports and the source MAC address see col.11 lines 50-59; wherein the learning of source address is triggered based on the existence of the source address and ports).

For claim 3, Hendel discloses an apparatus further comprising a memory to store a forwarding database (See Fig.4 element 413 and/or 414), wherein the controller searches a forwarding database for the source MAC address when determining whether an association exists between one of the plurality of network ports and the source MAC address (see col.11 lines 50-59; Learning process requires the search in the forwarding database to trigger the learning process).

For claim 4, Hendel discloses an apparatus wherein the controller further determines whether no request to approve the association between the one of the plurality of network ports and the source MAC address has been sent to the CPU interface (see col.11 lines 50-59; since the new/unknown source address arriving at port E1 triggers the sending of notification to the CPS 460; it is clear that there is no prior notification is being sent because the source address is new/unknown).

For claim 5, Hendel discloses an apparatus wherein the controller further determines whether an unapproved association between the one of the plurality of

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network ports and the source MAC address exists, when determining whether no request to approve the association between the one of the plurality of network ports and the source MAC address has been sent to the CPU interface (see col.11 lines 50-59; since the new/unknown source address arriving at port E1 triggers the sending of notification to the CPS 460; it is clear that there is no prior notification is being sent because the source address is new/unknown and there is no approved association since the address is not learnt before).

For claim 6, Hendel discloses an apparatus wherein the controller determines whether the association between the one of the plurality of network ports and the source MAC address exists, when determining whether the unapproved association between the one of the plurality of network ports and the source MAC address exists (see col.11 lines 50-59), and wherein the controller determines whether the association between the one of the plurality of network ports and the source MAC address is approved when the association between the one of the plurality of network ports and the source MAC address exists (see col.11 lines 50-59).

Claim 7 is rejected for same reasons as claim 3.

For claim 9, Hendel discloses an apparatus wherein the controller further creates an unapproved association between the one of the plurality of network ports and the source MAC address (see col.9 lines 12-17).

For claim 10, Hendel discloses an apparatus wherein when creating the unapproved association between the one of the plurality of network ports and the source MAC address the controller: creates the association between the one of the

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plurality of network ports and the source MAC address (see col.11 lines 50-59; since the new/unknown source address arriving at port E1 triggers the sending of notification to the CPS 460; it is clear that there is no prior notification is being sent because the source address is new/unknown); and indicates that the association between the one of the plurality of network ports and the source MAC address as unapproved (see col.11 lines 50-59; the notification is sent to the CPS 460; therefore, the association in the forwarding database is not approved yet).

For claim 11, Hendel discloses an apparatus, further comprising: a memory to store a forwarding database that has entries for the source MAC address and correspondent port (See Fig.4 element 413 and/or 414).

For claim 15, Hendel discloses an apparatus wherein the controller further: receives, from the CPU interface, in response to the request to approve the association between the one of the plurality of network ports and the source MAC address, an approval of the association between the one of the plurality of network ports and the source MAC address (see col.11 lines 50-59; wherein the learning of source address that already exists with different port entry triggers the sending of notification to the CPS 460 (claimed CPU interface)); and approves the unapproved association between the one of the plurality of network ports and the source MAC address (see col.11 lines 50-59; the notification is sent to the CPS 460).

For claim 16, Hendel discloses an apparatus wherein the controller further: receives, from the CPU interface, in response to the request to approve the association between the one of the plurality of network ports and the source MAC address, a

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disapproval of the association between the one of the plurality of network ports and the source MAC address; and deletes the unapproved association between the one of the plurality of network ports and the source MAC address (see col.9 lines 18-27 and col.10 lines 55-59).

For claim 17, Hendel discloses an apparatus wherein the packet further comprises a destination MAC address, and wherein the controller further: processes the packet according to the destination MAC address when an association between the destination MAC address and a further one of the plurality of network ports exists and the association between the destination MAC address and the further one of the plurality of network ports has been approved; processes the packet without regard to the destination MAC address when no association between the destination MAC address and the one of the plurality of network ports exists; and processes the packet without regard to the destination MAC address when the association between the destination MAC address and the further one of the plurality of network ports exists but the association between the destination MAC address and the further one of the plurality of network ports has not been approved (see col.11 line 60 to col.12 line 5).

For claim 18, Hendel discloses an apparatus wherein the controller further causes the further one of the plurality of network ports to transmit the packet, when processing the packet according to the destination MAC address (see col.11 line 60 to col.12 line 5).

For claim 19, Hendel discloses an apparatus wherein the controller further causes all of the plurality of network ports but the one of the plurality of network ports to

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transmit the packet when processing the packet without regard to the destination MAC address (see col.11 line 60 to col.12 line 5).

For claim 20, Hendel discloses an integrated circuit (see col.8 lines 24-26)

For claim 21, Hendel discloses a network switch (see Fig.2 and/or Fig.3).

For claim 22, Hendel discloses a network switch wherein the network switch is an Ethernet network switch (see Fig.2 and/or Fig.3; layer 2).

For claim 21, Hendel discloses a network switch further comprising a CPU that communicates with the CPU interface (see Fig.2 and/or Fig.3; CPU).

Claims 24-30, 32-34 and 38-46 are rejected for the same reasons as claims 1-7, 9-11 and 15-23, respectively.

As per claims 47-53, 55-57 and 61-65, method claims 47-53, 55-57 and 61-65 and apparatus claims 1-7, 9-11 and 15-19 are related as method and apparatus of using same, with each claimed element's function corresponding to the claimed method step. Accordingly claims 47-53, 55-57 and 61-65 are similarly rejected under the same rationale as applied above with respect to apparatus claims 1-7, 9-11 and 15-19, respectively.

As per claims 66-72, 74-76 and 80-84, Hendel teaches a computer readable medium (Fig.2: CPU and memory). The remaining steps are rejected under the same rationale as applied to the method steps of rejected claims 47-53, 55-57 and 61-65, respectively.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 12-14, 31, 35-37, 54, 58-60, 73 and 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendel in view of Karger (US 5,339,449).

For claims 8 and 12-14, Hendel further discloses an apparatus wherein the controller further determines whether the association between the one of the plurality of network ports and the source MAC address is approved (see col.11 lines 50-59; wherein the learning of new/unknown source address arriving at port E1 triggers the sending of notification (claimed request) to the CPS 460); indicating that the association between the one of the plurality of network ports and the source MAC address as unapproved (see col.11 lines 50-59; since the new/unknown source address arriving at port E1 triggers the sending of notification to the CPS 460; it is clear that there is no prior notification is being sent because the source address is new/unknown and there is no approved association since the address is not learnt before); receiving, from the CPU interface, in response to the request to approve the association between the one of the plurality of network ports and the source MAC address, a disapproval of the association between the one of the plurality of network ports and the source MAC address and deleting the entry (see col.9 lines 18-27 and col.10 lines 55-59). Hendel discloses all the subject matter with the exception of the use of flag for setting and clearing an entry. However, Karger discloses the use of flag for setting and clearing an

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entry (col.9 lines 13-19). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the flag for setting and clearing an entry for the purpose of reducing the processing/transmitting of the requests and therefore saving resources and processing (see abstract lines 9-12).

Claims 31 and 35-37 are rejected for same reasons as claims 8 and 12-14, respectively.

Claims 54 and 58-60 are rejected for same reasons as claims 8 and 12-14, respectively.

Claims 73 and 77-79 are rejected for same reasons as claims 8 and 12-14, respectively.

Response to Argument

6. Applicant's arguments with respect to claims 1-84 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and

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pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUD whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj, Kumar can be reached on 571-272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hicham B Foud/
Examiner, Art Unit 2467
11/07/2009

/Hong Cho/
Primary Examiner, Art Unit 2467